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AUTHOR Darkenwald, Gordon G.
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ABSTRACT

Effective teaching in adult basic education (ABE) is especially complex and difficult due to context--specific factors that function synergetically to impede success in teaching and learning. These distinctive attributes include open enrollment, irregular attendance, time on task, student diversity, and teacher characteristics. Research concerned with instructional outcomes shows that effective teaching methods cannot be disentangled from context, purpose, curriculum, and other variables. Suggestions for needed research include identifying: (1) errors, strengths, and weaknesses that characterize adult readers at different levels; (2) length of time for adults to progress through different reading levels; (3) needed amount of direct instruction; (4) needed amount of independent reading; (5) differences between development of literacy skills in adults and children; and (6) alternatives to conventional diagnostic and assessment tests. Three approaches that characterize contemporary practice in adult literacy education are competency-based adult education, tutorial approaches, and community-oriented approaches. (The paper includes a table summarizing research on methods and materials, summaries of five adult literacy education programs validated as effective by the Joint Dissemination Review Panel, and a six-page bibliography.) (YLB)

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EFFECTIVE APPROACHES TO TEACHING BASIC SKILLS TO ADULTS: A RESEARCH SYNTHESIS

BY

Gordon G. Darkenwald, Ph.D

OFFICE OF HIGHER EDUCATION & ADULT LEARNING

OFFICE OF EDUCATIONAL RESEARCH AND IMPROVEMENT

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CE 056 131

Effective Approaches to Teaching Basic Skills to Adults: A Research Synthesis

By Gordon G. Darkenwald

Purpose of Study

The topic I was asked to address in this paper is obviously of the utmost importance. Unfortunately, it is also a topic about which we know very little. The relevant research base is so thin, and of such poor quality, that I could end the discussion here by stating that the question of effective teaching cannot be answered. Admittedly, this assertion overstates the case. A handful of studies and other sources do provide a basis for identifying effective approaches to teaching basic skills to adults. These will be discussed in the concluding pages of the paper.

Search Procedures

Research was defined as disciplined inquiry for the purpose of advancing knowledge or theory. Thus, project or program descriptions, essays, position papers, "how to" articles, teaching guides, and most evaluation reports were excluded from the present review and synthesis.

The bulk of the research utilized for the present paper was identified through a comprehensive literature search conducted in April, 1986 (Darkenwald, 1986). A few additional sources were located in an update search conducted in June, 1986.

The first step in the search process was to review the entire series of ERIC bibliographics on adult basic education. The latest was published in 1985. The ERIC bibliographies yielded only a handful of germane, research-based studies. Consequently, a complete manual search of ERIC (both RIE and CIJE) was undertaken for the period 1981-1985. The following descriptors were utilized: Adult Literacy, Adult Basic Education, Adult Reading Programs, Illiteracy, and Literacy Education. A manual search of Dissertation Abstracts for the period 1981-1985 was

also conducted.

By the time the hand search was completed, it was obvious that (1) RIE was nearly barren of research entries; (2) nearly all the research was to found in journals (CIJE), especially Adult Literacy and Basic Education; and (3) the productive ERIC descriptors were Adult Basic Education and Adult Literacy. Consequently, a computerized search was conducted of CIJE entries between 1975 and 1980 using the descriptors Adult Basic Education and Adult Literacy. Of 236 journal articles published between 1975 and 1980, about a dozen qualified as research. After eliminating grossly flawed or incomprehensible research , the universe of relevent studies totalled 60. These studies, as well as several books and research monographs, are listed in the bibliography.

Quality of the Research Base

The research base in adult basic education is severely deficient, not only in quantity but in quality. Few of the 60 studies identified would be acceptable for publication in leading research journals, such as Adult Education Quarterly. Although not applicable to all 60 studies, the following methodological shortcomings are typical: (1) the problems addressed have little significance for theory or practice; (2) topics seem to be selected on an ad hoc basis, with little concern for following-up or replicating significant prior research; (3) very few studies are grounded in theory or guiding conceptual frameworks; (4) subjects or respondents are seldom randomly selected or, in experiments, randomly assigned to treatment or control groups; (5) instruments (scales, questionnaires, tests) are not described in sufficient detail; only rarely is evidence of reliability or validity reported; (6) crude or inappropriate statistical tests tend to be the norm; (7) key variables in many cases are not defined; (8) most of the studies do not describe their procedures in sufficient detail to permit replication; and (9) persons who conduct research in adult basic education appear in most cases to be unfamiliar with relevant theories and research in the social sciences

and the broader field of adult education.

Complexities of Effective Teaching

Most people would agree that an effective doctor is one who is successful in curing his or her patients' ills. But the reality is not that simple. All a doctor can do is facilitate the healing process, which ultimately depends on the patient's taking responsibility for adhering to the prescribed regimen. There are other factors, too, that are beyond the physician's control, such as the competence of support staff, the availability of sophisticated diagnostic technology, certain hospital policies, and so on. This is not to deny that some doctors are more effective than others. Nonetheless, effectiveness is in part contingent on factors beyond the doctor's control.

If the successful practice of medicine is complex and problematical, the art of successful teaching is even more so. To the extent that their students demonstrate academic progress, teachers are judged to be effective or ineffective. But, like doctors, teachers have limited control over the factors that promote success. Such factors include, among others, the characteristics of the learners, the curriculum, organizational and class-level social climate, administrative policies and procedures, provision of support staff, such as counselors, and availability of appropriate materials and instructional aids.

Effective teaching in any context is clearly a complex, difficult task. The thesis I argue in the following pages is that effective teaching in adult basic education is especially complex and difficult due to context - specific factors that function synergetically to impede success in teaching and learning. First, however, a brief comment on the notion held by some in the field that there is one best way to teach functionally illiterate adults.

One Best Way?

Proponents of various ideologies and approaches for teaching basic skills to

adults -- for example, those identified with Freire (1973), the Adult Performance Level Project, and competency-based adult education -- often believe that theirs is the one best way to teach literacy to adults. Although, as described subsequently in this paper, there are preferred ways of teaching for specific purposes, or specific subgroups of the target population, it is naive indeed to embrace the notion of "one best way."

If the discussion above concerning the complexities of teaching is insufficient to discredit this misconception, perhaps the widely-held postulate of "equifinality" will be more persuasive. A basic tenet of open systems theory (Katz & Kahn, 1966), equifinality postulates that there is always more than one way to reach a desired end in any system, such as a classroom. In plain language, there is more than one way to skin a cat.

Impediments to Effective Teaching in Adult Basic Education

Before considering specific impediments to effective teaching in ABE, it is important to make the case that at least the federally-funded program, albeit with many local exceptions, has been less effective than one might hope or expect. Of particular concern is the fact that improvement in basic skills has been modest at best. However, basic skills aside, many positive outcomes, such as dramatic gains in self-esteem and self-confidence, have been validated by the research literature (Darkenwald & Valentine, 1984; Development Associates, 1980; Kent, 1973).

Gains in Basic Skills

Perhaps the best designed, most generalizable study is that conducted by Kent (1973). His longitudinal (18 month) evaluation of the federally-supported ABE program utilized a sample of 2,300 ABE students from 200 classes

in 90 programs in 15 states. A summary of Kent's testing procedures and findings is provided by Larson (1980).

> He administered the Tests of Adult Basic Education to the group in January and again in May of 1972 and found an average reading gain of 0.5 grade levels and an average math gain of 0.3 grade levels. Twenty-five percent of the population gained over one reading grade level, while one-third showed no gain or a net loss (pp. 29-30).

Kent also reported results from a similar study of Manpower Development and Training Act programs. After 54 hours of instruction, the average reading grade level increase was 0.4.

In view of these statistics, and similar findings from local evaluations, it seems reasonable to conclude that the adult basic education program has been ineffective in achieving its primary goal of teaching the basic skills to functionally illiterate adults.

The crucial question, of course, is why have the majority of ABE programs been unsuccessful in their efforts at teaching the basic skills? My thesis, as noted previously, is that the answer lies in the distinctive attributes of the ABE enterprise--attributes that interact to impede program success. These dysfunctional attributes are examined below.

Open Enrollment

The majority of ABE programs recruit and enroll students on a continuous basis. In part, this policy is designed to counteract the effects of heavy dropout rates. Local funding levels and therefore jobs depend on state and ultimately federal headcounts (Mezirow, Darkenwald, & Knox, 1975). The consequences for effective instruction are decidedly negative. The teacher is faced with a constant influx of new students who place heavy demands on his/her time at the expense of continuing students. In a national survey of ABE teachers, 45% of the respondents rated "continuous enrollment of new

students" as a factor that interfered moderately or greatly with teaching and learning (Mezirow, Darkenwald, & Knox, 1975, p. 67). Interestingly, the corresponding figure for ESL teachers was 72%.

Irregular Attendance

Irregular attendance is a universal characteristic of ABE that has been documented by numerous studies (e.g., Darkenwald, 1975; Darkenwald & Valentine, 1984; Kent, 1973; Mezirow, Darkenwald & Knox, 1975). Teachers point out that instructional continuity is disrupted due to high absenteeism. So, too, is time on task. A national survey of urban ABE teachers found that irregular attendance was perceived by 85% as the single most serious impediment to effective teaching and learning (Mezirow, Darkenwald, & Knox). Irregular attendance, like dropout, is associated with both lack of motivation and self discipline (attendance declines sharply in bad weather) and situational barriers related to adult life roles and responsibilities. With respect to the later, 52.1% of ABE students surveyed by Darkenwald & Valentine (1984, p. 69) reported that they "had trouble attending class due to job or family responsibilities."

Time on Task

Time on task refers to the seemingly self-evident proposition that the more time a student spends on a particular learning task, such as decoding or addition, the greater the student's mastery of the task in question. In ABE, time on task is adversely affected by irregular attendance and by the typical schedule that provides some four to six hours of instruction per week. Moreover, since homework is seldom assigned in ABE, time on task per classroom hour is much lower than is typical for schoolchildren.

Contrary to the views of many adult educators, adult students often require

more time to learn language and literacy skills than do children. Sticht (1982), among others, provides compelling evidence bearing on this point. In a series of three experiments, he investigated the effect of method and rate of presentation of materials on reading achievement for adults with an average reading level of 5.5 and 3rd to 5th graders reading on grade level. Sticht found no evidence that adults performed better or learned more quickly than children at comparable reading levels.

In a subsequent paper commenting on the implications of the above study and similar investigations, as well as the importance of addressing the particular needs of adults, Sticht (1983) observed that these considerations

> challenge the use of brief programs of concentrated study with many adult literacy students and argue for a more extended program of education for adults than is typically achieved, particularly if they are to reach the higher levels of skills...or for a more targeted approach to specific literacy skills such as those needed in a particular job...or academic program (p.8).

Student Diversity

Due to variability in life experiences and socialization, any group of adults will be much more diverse than any group of children or adolescents. Moreover, unlike schools and colleges, ABE classrooms are not age-graded, nor in most cases homogeneously grouped by proficiency in the basic skills. Thus the teacher is typically confronted by a class with divergent needs, motivations, expectations, aptitudes, and skill levels. The larger the class, the more difficult the task of accomplishing some degree of individualization of "personalization." Fifty-four percent of ABE teachers who responded to a national survey rated "too much variation in ability and/or skill levels" as an impediment to effective teaching and learning (Mezirow, Darkenwald, & Knox, 1975, p. 67).

In the absence of total individualization, student morale and motivation suffer due to the lack of "benchmarks" or "sign posts" to help them gauge their progress. Teachers may try to boost motivation by providing feedback in the form of test scores (which is often counterproductive), but the lack of grades or other tangible indicators of accomplishment, such as special certificates, inhibits teachers' efforts to deal with the problem. Evidence that the problem is serious and widespread can be found in Mezirow, Darkenwald and Knox (1975) and Darkenwald and Valentine (1984). For example, in the latter study students reported that feelings of not making enough progress toward their individual goals was the most serious problem they experienced in attending ABE classes.

Teacher Characteristics

Clearly, many ABE teachers are caring, competent professionals. However, in the typical case, the administrative organization of ABE programs (due ultimately to inadequate funding) impedes the employment of full-time, professionally trained instructors. This appears to be less true of programs sponsored by the private sector (especially business and industry) than of programs funded under the Adult Education Act.

The weight of evidence indicates that the great majority of ABE teachers are not adequately prepared to teach basic skills to undereducated adults. The reasons are several: part-time employment, which discourages a professional commitment to teaching adults; very few opportunities for full-time careers in ABE; limited opportunity for pre-service education and, except in four states, lack of special certification for teaching adults; inadequate provisions of in-service training; and the documented

lack of effectiveness of the in-service training that is provided (Development Associates, 1980; Fingeret, 1984; Kent, 1973; Mezirow, Darkenwald, & Knox, 1975). It should be understood that the situation in some states and many local programs is not as bleak as that described above for the U.S. generally.

What Can Be Done

As noted at the beginning of this section, the impediments to effective teaching described above are "built in" attributes of the majority of ABE programs. Ultimately, they derive from lack of adequate funding and the related need to maximize the student headcount. Program administrators can do little to remedy these problems; the solution depends on action by the federal government, and to some extent the states. Until government decision-makers take seriously the problem of adult literacy and provide adequate funding to support effective programs, there is little prospect for change. The much-heralded National Literacy Initiative--despite some bandaid undertakings--has amounted to little more than pious rhetoric.

Effective Approaches to Teaching Undereducated Adults

Since adult literacy programs seldom focus exclusively on instruction in the basic skills, this section of the paper will consider the question of effective teaching from a broad perspective. Moreover, as previously noted, contextual factors cannot be ignored. Approaches to teaching that are effective under one set of conditions, or for a particular purpose, may be ineffectual under different circumstances or for different purposes. To give a simple example, three broad purposes are served by instruction

in reading: learning to read, reading to learn, and reading to do. One need not be a reading specialist to deduce that different instructional methods are required for each of these distinctive purposes.

To illustrate the range and complexity of contextual factors that influence the effectiveness of instruction in ABE programs, two pertinent studies are summarized below. It should be kept in mind that these studies address only a few of the variables that interact to affect the outcomes of literacy education.

Teaching Style and Achievement

Conti (1985) conducted a study to determine the relationship between teaching style and student achievement in an ABE setting. The sample consisted of 29 teachers (7 ABE, 14 ESL, 8 GED) and their 837 students (115 ABE, 473 ESL, 249 GED). The majority of students were female; the mean age was 30. Teaching style was measured by the Principles of Adult Learning Scale (reliability = .92). Data on student achievement were obtained from program records. Analysis of co-variance and other statistical procedures were employed to analyze the data set. In brief, Conti found that GED students achieved more in teacher-centered classrooms, but ABE and ESL students learned more in collaborative or learner-centered classrooms. Since GED instructors teach to the test, typically using didactic methods, whereas ABE and ESL instructors typically take into account a diversity of individual needs and goals, Conti's findings are not difficult to interpret.

Teacher Characteristics and Curriculum Emphasis

Darkenwald (1975) investigated the effects of teacher race, and the

intervening variable of non-traditional subject emphasis, on dropout and attendance rates among black students in urban ABE programs. The sample (drawn nationally) consisted of 478 randomly selected ABE teachers whose students were nearly all black. Of the 478 teachers, 191 or 40% were themselves black.

Compared to white teachers, black teachers reported substantially lower dropout rates and substantially higher class attendance. It was also observed that black teachers placed much greater emphasis on the "non-traditional" subjects of consumer education, health education, ethnic/racial heritage, and coping skills. It was reasoned that much, if not all, of the variation in dropout and attendance rates might have been due to the greater emphasis by black teachers on subject matter of direct relevance to the urban poor. To test this hypothesis, an index of non-traditional subject matter was constructed and used as a control variable in statistical analyzes. The findings indicated that, controlling for subject matter emphasis, black/white differences virtually disappeared. Thus, subject emphasis, not teacher race, accounted for differences in dropout and attendance rates. The study suggests that cultural sensitivity (being on the same "wave length" with students") is crucial to effective teaching and that this variable is associated with teacher background characteristics.

It should be clear from the preceding examples of research concerned with instructional outcomes that effective methods cannot be disentangled from context, purpose, curriculum, and numerous other variables that in fact largely determine effectiveness. The next section summarizes the

research on methods and materials, much of which is concerned with reading. Very few studies were indentified that focused on the other basic skills of writing and mathematics.

Research on Methods and Materials

The research summarized on Table 1 below is ordered chronologically, from the earliest study judged worthy of inclusion to the latest. It is noteworthy, as mentioned previously, that there is no evidence of the development of cummulative lines in inquiry; in fact, not a single study has been replicated. The only exception is research on job-related reading. Except for Larson (1980), this large body of research is not included in Table 1. Since Larson's large-scale field experiment is exemplary, it was selected as representative of similar studies.

Table 1* RESEARCH ON METHODS & MATERIALS

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Study, Date & Purpose	Sample	Description	Findings	Comment
Hutchinson, L. 1978 To determine whether lessons designed to emphasize preferred interests would improve functionally illiterate adults' class attendance over a 15-week period.	Experimental and control groups each consisted of 20 ABE students reading at less than 4.0 level.	Experimental group was given segmented instruction, including topics selected according to subjects' identified interest preferences. Classes were two hours long and met twice a week for 15 weeks. Control group had similar schedule but instruction was not segmented or interest-oriented.	Attendance for experimental group was significantly higher.	From description, it seemed that experimental group was exposed to a variety of instructional innovations, so it is not clear that increase in attendance was due to "interest-oriented" curriculum alone.
Katchen, L. 1980 To examine effects of paradigmatic language training on reading and writing of adult illiterates.	10 male prison inmates with less than 5.0 reading level.	Pre-post experimental design. Pre/post test on Woodcock reading and oral paradigmatic/syntagmatic language inventory; writing sample. Post-test after approx. 45 hrs. of special training.	Gains on all tests at end of training; follow-up testing 5 weeks later showed stability of gains.	Tiny N; obscure skill area.
Larson, G. 1980 To determine the effects of Army literacy instruction on job training attrition (failure) and time required to complete subsequent job training programs.	2,000 Army trainees with reading scores below 6.1.	Students randomly assigned to six weeks of literacy instruction (treatment group) and job training (control group).	The six week literacy program had no effects on attrition from job training, nor did it affect time required to complete subsequent job training.	Exemplary large-scale field experiment. Results refute notion that literacy training positively affects job training

(continued)

*Adapted from Darkenwald, 1986

Table 1, continued

Study, Date & Purpose	Sample	Description	Findings	Comment
				performance. Author recommends integrating job literacy instruction with job training at training site.
Lempel, L. 1980 To identify reading content preferred by adult new readers.	65 ABE students reading at intermediate (4-6th) level.	Respondents asked to rate 20 materials (based on brief description) as to their degree of liking for each. Then they read selected passages from each and rated them again.	Statistically significant preference for functional materials, but absolute difference small. Tendency to rate all materials highly. Blacks as a group expressed strong preference for functional materials.	Major contribution is findings regarding black students.
Jain, B. J. 1982 To determine effects of teacher directed instruction, along with other factors, on achievement and attendance.	Students (N=?) in 7 ABE classes.	Data gathered through classroom observations, achievement tests.	Teacher-directed instruction was related to higher achievement rates and was not associated with higher absenteeism rates.	"Directed instruction" not defined; no information given on "nondirected" instruction either.
Malicky, G. & Norman, C. 1982 (1) To describe entry reading strategies of both adult illiterates who did and did not make progress after instruction and (2)to describe changes in their reading strategies after instruction.	16 adults in full-time ABE, reading at or below 6th grade level.	Sample was tested before and after each 10-week period of instruction-3 remained for 3 such periods. Oral reading miscues were analyzed (test used was Classroom Reading Inventory (standardized).	The "no-gain" group, although overall reading did not improve, shifted from grapho-phonic to grammatical errors (showing more knowledge of word structure) resulting in an exiting profile similar to "gain" group at entry. Postulates that students may need period to adjust negative strategies before improvement will occur.	Tiny N, not random or described completely.

Table 1, continued

Study, Date & Purpose	Sample	Description	Findings	Comment
Meyer, V. 1982 To determine effectiveness of Prime-O-Tec (combination visual-audio-tactile-kinesthetic-motor input to reading instruction) with adults.	20 ABE students. Control group (N=10) with TABE mean score of 5.6; experimental (N=10) mean score of 6.4.	Control group given usual reading instruction (7 hrs.). Experimental group given 7 hours of Prime-O-Tec strategy.	Total gain of control group = 1 mo. Total gain of experimental group = 7 mo.	N too small. Higher TABE mean of experimental group probably biased findings.
Kistler, M.C. 1984 To compare effects of two adult education approaches, competency-based and traditional.	804 ABE students. Stratified random sample from 13 districts in California.	Pretest on CASAS Life Skills test, then post-tested after approximately 100 hours of instruction.	Adjusted mean scores of students in competency based education were significantly different from traditional educational group's scores. Greater gains demonstrated by groups in traditional education.	Useful study with significant findings.
Norman, C. A. & Malicky, G. V. 1984 To compare the effectiveness of a process-oriented, functional approach and a skills oriented, developmental approach to teaching reading to low-literate adults.	34 volunteers for study who scored grade 6 or below on the TABE.	Student's assigned randomly to functional and skills oriented treatments. Individual instruction twice a week in 1 1/2 hour sessions. TABE administered as post-test after 20 weeks in program.	No differences in effectiveness of the two methods of reading instruction.	Findings could be due to small N and subject attrition (9 dropouts). Results typical of method comparison studies.
Conti, G. J. 1985 To determine the relationship between teaching style and student achievement in an ABE setting.	29 teachers, 7 ABE, 14 ESL, 8 GED. 837 students, 115 ABE, 249 GED, 473 ESL. Mean age-30. Majority females.	Teaching style measured by Principles of Adult Learning Scale (reliability = .92). Student achievement obtained from records. Data subjected to analysis of covariance and other statistical analyses.	GED students learned more in teacher-centered classrooms while ABE and ESL students learned more in collaborative or learner-center classrooms.	Intriguing findings. Needs replication.

Drawing on several of the studies listed in Table 1, as well as descriptive and prescriptive literature, Phillips, Bellorado, & Robinson (1985) provide a reasonably accurate account of what is currently known about adult beginning readers.

> Studies indicate that adults differ in speed of performance, reaction time, and certain physical abilities, such as eidetic imagery (i.e., the ability to see words in the mind's eye). Past experiences, personal interests, and sense of self further distinguish adults from children.....There is also some evidence that adults learn to read when discrete skills are presented in a sequential manner.....Other preliminary studies of adults.....indicate that successful beginning readers can identify what they know and do not know, can monitor the extent to which they grasp meaning and are willing to make successive attempts to read accurately. It has also been found that successful adult beginning readers appear to rely heavily on graphophonic cues at first, then later integrate the use of grammatical cues.....The few studies of the differences between adult and children beginning readers indicate, too, that adults seem to differ in the way they misuse words, in the way they use and misuse vowels, patterns, and semantic cues, and the way they incorporate spelling into their reading strategy.....There is additional evidence that once low-literate adults have mastered decoding they may not be able to apply these skills as automatically as do children who read at a beginning grade level. These adults may need extended practice to be able to apply decoding skills easily (p. 4).

The preceding summary suggests that (1) most of the literature is concerned with the beginning reader; (2) compared with children, adult beginning readers tend to have more deficits than strengths; (3) the research findings are highly tentative; (4) implications for practice are limited; and (5) a great deal more research is needed, especially studies focused on the majority of adults who are beyond the decoding stage.

Needed Research

Some suggestions for needed research are enumerated below. Needless to say, the list is far from exhaustive. Nonetheless, it is reasonably

representative of current thinking about research priorities.

Chall (1984), a distinguished scholar in the field of reading, proposes four broad questions that need to be addressed by future researchers:

(1) What kinds of errors, strengths, and weaknesses characterize adult readers at different levels?

(2) How long does it take for adults to progress through different reading levels?

(3) How much direct instruction is necessary?

(4) How much independent reading is necessary?

A more detailed research agenda was proposed by Phillips, Bellorado, and Robinson for the National Adult Literacy Project (1985). Among the suggestions for studies directly related to the improvement of teaching and learning in adult basic education are the following (pp.20-21).

(1) Conduct studies that focus on identifying the differences between the development of literacy skills in adults and in children. These investigations should be built upon existing research into the reading strategies and errors that seem to be most common to adult beginning readers.

(2) Conduct a study to identify existing procedures that assess functional literacy skills at acceptable levels of validity and reliability. Procedures should have a clearly articulated rationale...[and] provide a consistent and stable measure of literacy abilities that are directly related to a variety of specific program purposes and needs.

(3) Conduct a study of the validity and reliability of existing alternatives to paper and pencil tests. Alternative measures should also have a clearly-articulated rationale and provide a consistent and stable measure of literacy abilities related to a variety of specific program purposes and needs.

(4) Conduct a study to identify and describe promising alternatives or supplements to the use of conventional diagnostic and and assessement tests--especially those that involve learner participation.

(5) Conduct a study based on the hypothesis that there is a positive relationship between culturally sensitive teachers...and student retention and achievement.

The National Literacy Project agenda puts heavy emphasis on assessment and diagnostic techniques, while totally ignoring other promising topics for further research, such as the language experience method, Freirian techniques, particularly the utilization of "generative themes," and, incredibly, the applications of electronic media in ABE, such as computer assisted instruction (CAI). With respect to CAI, Fingeret (1984, p.34) observes that "the initial research in CAI is exciting and promising, although limited at present."

Fingeret's comments on the potential of CAI and other instructional approaches points to a major problem in the field of adult literacy education. In sharp contrast to K-12 education, promising instructional practices have seldom been rigorously evaluated. In the absence of rigorous evaluation, or what is often termed "validation," we have little assurance that a particular instructional practice or innovation is effective in enhancing adult learning.

It is important, and instructive, therefore, to review the handful of adult literacy programs and practices that have been rigorously evaluated and judged effective.

Programs and Practices Validated as Effective

The following pages summarize the adult literacy education programs validated as effective by the U.S. Department of Education's Joint Dissemination Review Panel. Validation by the JDRP requires detailed, convincing evidence of program effectiveness. The majority of applications for JDRP validation are rejected. The following summaries are based on information published in Adult Literacy: Programs That Work (U.S. Department of Education, 1984).

PROJECT Adult Performance Level Project (APL)

A competency-based system of education that combines the diagnosis, prescription, teaching, evaluation, and credentialing of life-coping skills.

Target Audience: Approved by JDRP as a program for general English-speaking population over 18. Curriculum materials for undereducated adults also have implications for elementary secondary curricula, but no evidence of effectiveness has been submitted to or approved by the Panel.

Description: Project research measured specified minimum competencies an adult must possess to function successfully.

Based on the objectives identified by APL research, a complete curriculum applies reading, writing, speaking-listening-viewing, computation, problem-solving, and interpersonal relations skills to the content areas of consumer economics, occupational knowledge, health, community resources, and government and law. For example, adults learn how to read job descriptions or open savings accounts. The curriculum provides the activities and materials needed to teach toward each of the APL lifecoping skills objectives. Printed materials are supplemented with cassette tapes. A pre-post diagnostic instrument for each objective is also included.

The APL competency-based high school diploma program offers adults a relevant alternative to the conventional four-year high school program and to the General Educational Development Test (GED). Adults can earn a regular high school diploma by demonstrating competencies gained through life skills-oriented adult education programs in combination with those gained through experience. The basic steps to the competency-based diploma are: placement tests, the competency-based curriculum described above (if indicated by scores on placement tests), a series of life-skills activities, and demonstration of an entry-level job skill or postsecondary education skills or skills in home management/ maintenance.

APL staff offer awareness, training, and follow-up technical assistance to adopters.

Evidence of Effectiveness: Program graduates demonstrate functional competence by scoring at APL level 3 in every objective within the five APL Content Areas, and by showing 100% competence in Life Skills Activities. Six-month follow-up surveys of graduates indicate higher levels of self-satisfaction. Graduates frequently recommend the program to others.

Implementation Requirements: The APL curriculum can be adopted by a unit as small as a single teacher. The APL Diploma Program can be adopted by a unit as small as two persons performing counseling, teaching, and assessing functions. Preimplementation training conducted by APL staff is required. Reassignment of existing personnel usually suffices.

PROJECT Jefferson County Adult Reading Program (JCARP)

A program to deliver literacy instruction and life coping skills instruction.

Target Audience: Approved by JDRP for adults 16 years and older who are out of school and have a reading level below 6.0 grade as measured by a standard test.

Description: Two years of JCARP operation showed that materials, methods, and teachers were not singularly significant in program success, but that those students who attended more often showed greater gains. The necessity was, therefore, to develop a strategy to increase student retention. To that end, counseling was inculcated into each of the four components of JCARP that aimed to address the personal and social needs of this population as well as their academic deficiencies. The four components or intervention strategies are: Recruitment: Traditional means of recruitment such as print, electronic, and business/industry links were employed, but in addition phone conversations with potential students were made to allay anxieties this population feel about pursuing their education. Former students also went door-to-door and addressed audiences to stress their personal experiences and provide a successful role model to help potential students overcome fears. These former students also met new student at the classroom and remained as tutors. This effort was designed to create a secure and unthreatening environment, thus lessening the likelihood of attrition. Staff training occurs three times during the first month of the program. First, in order to sensitize the staff to the atmosphere which needs to prevail for successful program operation, teachers are oriented to the characteristics of the undereducated adult through use of films, slide/tapes, and a panel of successful students. They learn to use the commonality of the students' apprehensions and deficiencies to promote group cohesion and mutual support. Secondly, teachers learn to conduct individual conferences so that students can formulate priorities and goals through the counseling process. Third, the teaching staff is instructed how to use the test instruments and basal materials and how to prepare an individual plan which considers the reading skill deficiencies, life skill needs, and priorities of each student. Instruction: The teacher selects one of three basal series and places each student according to performance on a standardized assessment test and placement inventories. According to the student plan developed in the enrollment process, additional materials are selected from a list compiled by the JCARP staff. Classes are scheduled to accommodate needs of students. Each three-hour class is divided in half: one half devoted to the individual's plan for skill building; and the other half to group dynamics where intellectual and social improvement through the support system are the goals. Evaluation: Weekly assessment sessions are designed to encourage students' progress. Overall goal achievement is addressed at mid-year by means of student-teacher conferences. These conferences concentrate on retention of student.

Evidence of Effectiveness: JCARP participants experienced an attrition rate of 22%, whereas participants' rates in comparable programs were from 52-80%. JCARP participants made significant gains in reading ability, from grade level of 3.62 to 5.15 during 82 hours of instruction. This was a .70 greater gain than for comparable programs. These effects have been consistent over the three years of program operation.

PROJECT California Adult Student Assessment Systems (CASAS)

A comprehensive educational assessment system designed to provide adult education agencies with effective assessment materials and procedures to develop and evaluate a competency-based life skills educational program.

Target Audience: Approved by JDRP for secondary students and adults who are participating in ABE, ESL and high school programs.

Description: The California Adult Student Assessment System is a comprehensive set of procedures and resources designed to enable adult educators to develop and evaluate a life skills curriculum for competency-based educational programs. CASAS provides an interrelated, flexible system that links curriculum, instruction and asessment, allows for growth through program levels, and provides a means of assessing students with tests designed to measure those competency statements selected and taught at the various difficulty levels. The System is comprised of four major elements, specifically: a CASAS competency list; CASAS Item Bank and User's Manual; Curriculum Index and Matrix; and Implementation Workshops. CASAS is adaptable to a variety of educational settings with diverse student populations.

Intended beneficiaries of CASAS are institutions that provide Adult Basic Education, English-as-a-Second Language, and high school completion programs for adults and secondary level students. Moreover, the students who participate in these educational programs are the beneficiaries of any improved instruction and management services provided by such institutions.

Evidence of Effectivenes: After one year, adult education agencies who utilized the CASAS model achieved a higher level of CBE implementation than institutions using other CBE approaches, as measured by the Institutional Self-Assessment Measure (ISAM). Students who participated in CASAS classrooms demonstrated a higher retention rate than students in non-CASAS classrooms, as measured by program enrollment records.

Implementation Requirements: Adopters must purchase Testing materials. Existing staff may be used. No special facilities or equipment are required.

PROJECT Project Class (Competency-based Live-Ability Skills)

A series of competency-based modules for teaching survival skills to adults of low-level reading ability.

Target Audience: Approved by JDRP for adults reading at 0-8 grade levels. This program has been used in high schools for basic skills remediation; in continuation schools, middle schools, and correctional institutions; and by programs for the mentally and physically handicapped, community outreach programs, and the military, but no evidence of effectiveness has been submitted to or approved by the Panel.

Description: Adult students often have difficulty in transferring academic learning from classroom settings to situations encountered outside school. To address this problem, Project CLASS has developed two series of competency-based modules--one for use with teacher-directed instruction, one for independent study--providing instruction in survival skills to adult students at low (0-8 grade equivalents) reading levels. In classroom situations, students learn survival skills while improving their reading, writing, and math. Students who read at a higher level may use independent modules to meet course requirements or to earn elective credits.

The modules, which address useful topics in consumer economics, community resources, health, government and law, interpersonal relationships, and occupational knowledge, contain between one and nine objectives (average: four). Objectives are clearly stated, taught, and tested and show participating teachers, students, and others what the student has accomplished. Sixty modules have been developed, divided equally between APL level I (0-4 grade equivalent) and II (5-8 grade equivalent). To enable students to learn concepts at their own reading level, level I modules include two versions of the same concepts, one written at grade 0-2 reading level, the other at grade 3-4 level. Level II modules cover different objectives. Each module includes a teacher's guide (containing objectives, concepts, skills, teaching/learning strategies, resource list, evaluation report, annotated bibliography, answer keys, and specially written teacher's resources), student handouts, and a pre/posttest. An average of six hours (one to three class sessions) is required to complete a module.

Modules can also be used to provide remediation for the APL and SHARP tests.

Evidence of Effectiveness: Field testing using a locally developed instrument in a pre/post design to measure mastery of module objectives was conducted in fall 1979 at Adult Basic Education and English as a Second Language programs at four California sites ranging from rural (Clovis) to highly urban (San Diego). Pretest data were used to remove bias in favor of treatment classes. Differences between treatment and control groups in gain in percent of students mastering objectives were highly significant, as reflected in differences in median gains at individual sites (e.g., Clovis: 80 vs 0; San Diego: 20 vs 0).

Implementation Requirements: Adopters must purchase a set of CLASS and Life Skills modules and provide inservice training and staff development time for teachers involved. Program can be implemented by a single teacher, an entire school, or a district. Facilities for reproducing tests and handouts are needed. No other special facilities or equipment are required.

PROJECT Project F.I.S.T. (Functional In-Service Training)

An adult literacy program that uses trained volunteer tutors.

Target Audience: Approved by JDRP for adults 16 years old and older who are out of school and read below the 4.0 level.

Description: Project FIST has developed a volunteer-based administrative and instructional delivery system aimed at meeting needs of low-level adult readers. A major reason for the ineffectiveness of traditional adult basic education programs is the lack of resources to provide the one-to-one instruction needed to remediate severe reading deficits. FIST was originally conceived as an integral component of ongoing basic skills programs, providing the intensive one-to-one tutoring and support needed before minimally proficient readers can benefit from regular instruction. FIST can be incorporated by existing programs at low cost.

After securing the commitment of the local ABE program, a part-time coordinator-aide is hired and a recruitment campaign for tutors and students is mounted. The project's Administrator's handbook describes tested procedures for recruiting tutors and functionally illiterate adults, as well as how to establish a volunteer adult literacy component within an ongoing adult education program. The coordinator is trained by the project and is responsible for tutor and student recruitment, tutor training, arrangements for diagnostic and follow-up testing, student-tutor assignments, records management, and materials procurement. Tutors and students meet once or twice a week for one to two hours at a mutually convenient place, usually a local library or church, or within the learning center.

Tutor training is accomplished through a workshop using the project-developed text, Functional Literacy for Adults: A Worktext for Tutors. Emphasis is given to establishing a positive, empathetic relationship; selecting, creating, and using materials, and remediating specific reading problems. Workshop sessions usually meet once weekly for three hours over a six-week period.

Reading tests are administered regularly at four-month intervals. When test results show that students have outgrown their need for FIST, they are referred to the regular adult basic education program.

Evidence of Effectiveness: Results of the Woodcock Reading Mastery Tests showed improvement in the reading levels of project students. Other educationally meaningful findings were: tutor trainees improved their scores on the Tutor Training test, and students made positive behavioral changes in their lives as a result of participation in the project.

Implementation Requirements: FIST can be adopted by established ABE programs at very little cost. Basic requirements are the purchase of project materials, hiring or reassignment of staff to coordinate the project, attendance at pre-implementation training, and operation of the project for at least one year.

Although they differ in many respects, most of the JDRP-validated adult literacy programs exhibit the following common characteristics: (1) an integrated basic skills/life skills curriculum; (2) program-specific staff training; and, most fundamentally, (3) a competency based approach to ABE instruction. Competency based adult education (CBAE) merits further discussion, as does individual tutoring (see Project F.I.S.T.). Both are widespread approaches to ABE instruction for which there is evidence of effectiveness. First, however, the reader might note that the Jefferson County submission begins with an assertion that underscores the themes of complexity and time on task discussed previously: "Two years of JCARP operation showed that materials, methods, and teachers were not singularly significant in program success, but that those students who attended more often showed greater gains."

Competency Based Adult Education

Perhaps the best way to gain an understanding of what CBAE means is by reading the foregoing descriptions of the APL, CASAS, CLASS, and New York External High School programs. It is evident in the commentaries of various proponents of CBAE published in Adult Education Quarterly (Vol. 34, Winter 1984) that the concept is perceived somewhat differently by its prominent practitioners. However, the basic characteristics of CBAE seem to be those outlined by Fischer (1978):

(1) Competencies--explicit, known and agreed upon by the instructor and learner.

(2) Time--flexible; unlike a traditional class semester, time to complete a competency varies from student to student.

(3) Instruction--students choose from a variety of learning activities and experiences. CBAE processes are not limited to modules or paper and pencil activities.

(4) Measurement--Pre- and post-tests are administered to avoid re-learning information and to assess mastery of the competency.

(5) Certification--validation of mastery learning is encouraged.

(6) Program Adaptability--program decisions are based on student performance.....If a student has difficulty with a competency, the teacher can provide alternative materials and individual help. With program adaptability, the teacher can encourage interaction among the students that furthers interpersonal relations and problem solving by the individual and with the group.

There is little doubt that for certain purposes, in certain contexts, and properly implemented, the CBAE process can be an effective approach to adult literacy instruction. Its advantages are mostly self-evident. CBAE appears, as well, to be a way of mitigating the problem discussed previously of students lacking concrete benchmarks and positive reinforcement.

In a thoughtful commentary on CBAE, Fingeret (1984, p.30) notes that CBAE addresses the need for some "negotiated accountability system that responds both to funding sources and student goals," but warns against it becoming "an end in itself rather than a means toward specific--and limited--objectives." She continues with a caveat that echoes the thesis set forth earlier concerning the "built-in" impediments to effective programming in the majority of ABE programs:

> Although competency may be developed and evaluated in any number of ways theoretically, it is not clear that literacy programs have the resources or that staff have the training to implement a very wide diversity of methods and techniques. CBAE programs place an increased emphasis on record keeping; similar resource and skill issues are raised here. The process of negotiating competencies entails articulation between the instructors' values and beliefs about what students ought to learn. To what extent are instructors willing and able to engage in such reflection rather than simply appropriating a normative set of standards developed nationally or on a statewide basis? (p.31.)

Tutorial Approaches

Tutorial approaches, often using local aides as tutors, are the mainstay of ABE programs in isolated rural areas, such as Vermont and Appalachia. Of necessity the instructional delivery system relies on one-to-one teaching, typically provided by "circuit rider" instructors or aides. Although the Vermont and Appalachian programs (among others) are reputed to be effective, rigorous evaluations could not be located.

The other variant of the tutorial approach is exemplified by Project F.I.S.T. (see description above). Trained volunteers are used to provide one-to-one instruction for low-level readers (usually grade levels 0-4) whose needs can seldom be met by traditional ABE programs. Prominent providers are Literacy Volunteers of America and the Laubach organization. Hard evidence of the effectiveness of such programs, F.I.S.T. excepted, is apparently unavailable. However, the advantages of one-to-one tutoring: increased time on task, individualization, the develoment of supportive, trusting relationships between tutors and students, and the use of appropriate methods and materials for beginning adult readers all argue logically in favor of claims of effectiveness.

Community-Oriented Approaches

As with CBAE, there is no universally accepted set of goals or practices for what constitutes a community-oriented program. Nonetheless, most practitioners would probably agree with the thrust of Hunter & Harmon's (1979) statement in their report to the Ford Foundation:

> We recommend the establishment of new, pluralistic,

> community-based initiatives whose specific objective will be to serve the most disadvantaged hard-core poor, the bulk of whom never enroll in any existing program.
>
> These community-based initiatives would focus on persons in the communities where they live. The initiatives would require adults themselves to contribute to designing programs based on concrete learning needs growing out of specific issues affecting their lives in their communities. In addition, the programs that develop from these initiatives would relfect those needs arising from the interaction of their communities with the institutions of the dominant culture. Programs would be action-oriented. They would involve learning by doing and would occur at times and places determined by the community (pp. 104-105).

The emphasis in community-oriented programs tends to be on a collaborative process involving adult educators and people in the community. Achievement of specific goals or outcomes is often viewed as secondary in importance. This may be the principal reason, as Fingeret (1984, pp. 27-28) observes, that "Claims for the effectiveness of community-oriented efforts often appear to be more philosophically and ideologically grounded than developed through systematic inquiry."

Although compelling evidence of effectiveness is lacking, the rationale for community-oriented programs targeted on the poorest and least educated is persuasive (see, for example, Darkenwald & Larson, 1980; Darkenwald & Merriam, 1982; Mezirow, Darkenwald & Knox, 1975, as well as Hunter & Harmon).

Conclusions

The three approaches described above are those that characterize comtemporary practice in adult literacy education. These approaches or models subsume--or can subsume--specific methods or techniques, such as programmed instruction, the language experience method, computer assisted

instruction, the generative theme technique, use of discussion and task-focused groups, and many others. In other words, the general models are more or less ecletic. However, no single approach or model is a panacea for the problem of adult illiteracy or functional illiteracy. Each has its place, often in combination, in the design of effective strategies for promoting adult literacy.

The Basic Skills

Despite the title of this paper, the notion of teaching the basic skills in isolation is outmoded. Even the military and most job training programs have abandoned the practice of teaching the 3 R's divorced from context and intended application (Larson, 1980).

No literacy program can be effective without taking account of the multiple needs of undereducated adults. As illustrated in the JDRP-validated program descriptions, contemporary adult literacy programs almost invariably integrate a basic skills focus with instruction in life or "survival" skills needed by students to function effectively in the everyday world. In addition, most ABE programs address the affective needs of students related to their insecurities and low self-esteem.

Impediments to Effectiveness

There is no point in belaboring a theme that has been reiterated several times in this paper The built-in, dysfunctional characteristics of most adult literacy programs can be ameliorated only if government policy-makers resolve to "put their money where their mouth is." However, as Fingeret (1984) and Mezirow, Darkenwald & Knox (1975) note, this is

unlikely to occur unless literacy educators work together to press for policy and programming changes at both the state and federal levels.

A Final Word

More than one model or approach is necessary for effective literacy programs for the simple reason that different groups of functionally illiterate adults have different needs and characteristics.

Fingeret (1984, p. 39) points out that "Illiterate adults often are described with broad generalizations that contribute to constructing stereotypes that obscure reality." She goes on to note that "illiteracy does not, by itself, determine an individual's relationship to the larger society." Thus,

> Adults' perspectives on literacy education will reflect their assessments of their concrete situations; literacy programs must do likewise. A range of program models is necessary to correspond to the range of illiterate adults' characteristics and their social contexts (p.39).

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